"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

S/124/63/000/002/016/052
D234/D308

AUTHORS: Semikin, I.D., Kostogryzov, V.A. and Tsygankov, O.L.

TITLE: A radiation thermometer

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 2, 1963, 110, abstract 2B750 (Sb. nauchn. tr. In-t avtomatiki Gosplana USSR, no. 2, 1961, 153-164)

TEXT: A short theoretical explanation of the operation principles of the thermometer, a description of its design, certain test methods and some characteristics, are given. The thermometer is intended for temperatures from 600° to 1500°C; the time constant is of the order of 10 - 15 sec.
[Abstracter's note: Complete translation]

Card 1/1

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AVERIN, S. I.; SEMIKIN, I. D.

Length of the turbulent gas flame flowing at high pressures from cylindrical and conical nozzles. Izv. vys. ucheb. zav.; chern. met. 5 no.12:162-173 '62. (MIRA 16:1)

1. Dnepropetrovskiy metallurgicheskiy institut.

(Gas dynamics)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SVINOLOBOV, N.P.; SEMIKIN, I.D.

Dynamics of the smelting process. Izv.vys.ucheb.zav.; chern.met. 6 no.1:185-193 '63. (MIRA 16:2)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Open-hearth process—Thermodynamics)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

KAZANTSEV, Yevgeniy Ivanovich. Prinimali uchastiye: ZEMLYANYY, N.G., inzh.; KATSEN, L.G., kand. tekhn. nauk; SEMIKIN, I.D., prof., retsenzent; STEPANOV, Ye.S., red.; SHKLOVSKAYA, I.Yu., red.izd-va; KOROVINA, N.A., tekhn.red.

[Industrial furnaces; handbook for their calculation and design] Promyshlennye pechi; spravochnoe rukovodstvo dlia rascheтov i proektirovaniia. Moskva, Izd-vo "Metallurgiia," 1964. 451 p. (MIRA 17:4)

1. Dnepropetrovskiy metallurgicheskiy institut (for Semikin).

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

AVERIN, S.I.; SEMIKIN, I.D.

Calculating the length of a turbulent gas flame. Izv.vys.ucheb.zav.; chern. met. 8 no.4:202-211 '65. (MIRA 18:4)

1. Dnepropetrovskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

AVERIN, S.I., SEMIKIN, I.D.

Effect of various factors on the length of a turbulent gas flame. Izv. vys. ucheb. zav.; chern. met. 8 no.10:146-152 '65. (MIRA 18:9)

1. Dnepropetrovskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKIN, N.

Decreasing the cost of automotive transportation is an important task. Avt. transp. 36 no. 6:29-32 Je '58. (MIRA 11:7)

1. Chlen kollegii Ministerstva avtomobil'nogo transporta i shosseynykh dorog RSFSR.
(Transportation, Automotive--Cost of operation)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKIN, N.

Scientific technical conference on the improvement of the planning of automotive transportation. Avt. transp. 41 no.9:37-40 S '63. (MIRA 16:10)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKIN, N.

Up to the standards of new objectives. Avt.transp. 42 no.1:3-4 Ja '64. (MIRA 17:2)

1. Chlen kollegii Ministerstva avtomobil'nogo transporta i shosseynykh dorog RSFSR.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SHUL'MAN, Aleksandr Samoylovich; SEMIKIN, N.V., red.; NIKOLAYEVA, L.N., tekhn. red.

[Transportation of the Russian Federation during the seven-year plan period] Transport Rossiskoi Federatsii v semiletii. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1960. 103 p. (MIRA 14:6)
(Transportation)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

VERKHOVSKIY, Igor' Aleksandrovich, kand.ekonom.nauk; SEMIKIN, N.V., red.; STRYZHKOVA, M.I., red.izd-va; GALAKTIONOVA, Ye.N., tekhn.red.

[Analysis of the production and financial operations of automotive transportation units] Analiz proizvodstvenno-finansovoi deiatel'nosti avtokhoziaistv. Moskva, Nauchno-tekhn.izd-vo avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1960. 214 p. (MIRA 13:12)

(Transportation, Automotive)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

KURSHEV, A.N., red.; SEMIKIN, N.V., red.; BRONSHTEYN, L.A., red.; VERKHOVSKIY, I.A., red.; KASHKIN, V.I., red.; OSTROVSKIY, N.B., red.; POLCHANINOV, P.V., red.; YABLOKOV, V.I., red.; MAL'KOVA, N.V., tekhn. red.

[Manual for highway transport workers; ortanization of operations of automotive transportation units for passenger and freight transportation, operation and maintenance of rolling stock and traffic safety] Spravochnik rabotnika avtomobil'nogo transporta; organizatsiia raboty avtokhoziaistv, perevozki gruzov i passazhirov, tekhnicheskaia ekspluatatsiia avtomobil'nogo transporta i bezopasnost' dvizheniia. Moskva, Avtotransizdat, 1961. 607 p. (MIRA 14:12)

1. Russia (1917- R.S.F.S.R.) Ministerstvo avtomobil'nogo tranporta i shosseynykh dorog.
(Transportation automotive) (Traffic safety)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

KALABUKHOV, F.V.; SEMIKIN, N.V.; SHUL'MAN, A.S.; BRAZOVSKAYA, T.I.; MIZINOV, V.N.; BASH, M.S.; BRONSHTEYN, L.A.; POLCHANINOV, P.V.; VERKHOVSKIY, I.A.; KOROL'KOV, A.I.; GERONIMUS, B.L.; STRYZHKOVA, N.I., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Principles of the economics of automotive transportation; for the aid of those studying the economics of automotive transportation] Osnovy ekonomiki avtomobil'nogo transporta; v pomoshch' izuchaiushchim ekonomiku avtomobil'nogo transporta. Moskva, Avtotransizdat, 1963. 357 p.
(MIRA 17:3)

1. Zaveduyushchiy kafedroy ekonomiki i organizatsii proizvodstva Moskovskogo avtomobil'no-dorozhnogo instituta (for Bronshteyn).

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKIN, V.

Work of the economic analyst group of the motorship "Ristna."
Mor. flot 24 no.12:11-12 D '64. (MIRA 18:8)

1. Pervyy pomoshchnik kapitana teplokhoda "Ristna".

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKIN

REZNIK, L.G., SEMIKIN, V.I.

Measuring gas pressure in the coal bed "Zamechatel'nyi" at Karaganda Basin mine no.19. Izv.AN Kazakh.SSR.Ser.gor.dela, met. i stroimat. no.11:123-129 '56. (MIRA 10:1)
(Karaganda Basin--Mine gases) (Pressure gauges)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKIN, V., brigadir

Three years without accidents. Za bezop. dvizh. 5 no.6:4-5 Je '62. (MIRA 15:10)

1. Brigada kommunisticheskogo truda 2-y kolonny 6-go taksomotornogo parka, Moskva.

(Moscow—Traffic safety)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

LEGKOSTUP, O.I.; SEMIKIN, V.I.

Conference on the theory and practice of oxygen-blown converter processes. Izv. vys. ucheb. zav.; chern. met. 8 no.5:210-212 '65. (MIRA 18:5)

1. Dnepropetrovskiy metallurgicheskiy institut.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

GOROBCHUK, V.M.; SEMIKIN, V.L.

Reducing output-signal pulsations of the E-2D converter in the EAUS system. Avtom. i prib. no.4:68-70 O-D '63. (MIRA 16:12)

1. Lisichanskiy filial Instituta avtomatiki Donetskogo soveta narodnogo khozyaystva.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 8332-66 EWT(1)/EWA(h)

ACC NR: AP5025746 SOURCE CODE: UR/0286/65/000/018/0094/0094

AUTHORS: Semikin, V. L.; Zaugol'nyy, R. V.

ORG: none

TITLE: A deviation indicator. Class 42, No. 174854 [announced by Scientific Research Institute of Control Computers (Nauchno-issledovatel'skiy institut upravlyayushchikh vychislitel'nykh mashin)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 94

TOPIC TAGS: error measurement, tunnel diode, capacitor, transformer, electric relay, preamplifier, diode, VOLTAGE STABILIZATION

ABSTRACT: This Author Certificate presents an indicator of the deviation of a constant voltage from a given value. The indicator has a high input resistance and contains a modulator in the form of a tank circuit with a relay-switched capacitor, a preamplifier, and an output device. In order to increase the conversion factor, the noise immunity, and the reliability, the modulator has a diode limiter (see Fig. 1). A capacitor and the normally open contact of a relay are connected to the modulator output for periodic connection of the primary of the transformer when the maximum discharge current is reached in the circuit. A tunnel-diode threshold element is used as the output device.

Card 1/2 UDC: 621.317.18

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 8332-66

ACC NR: AP5025746

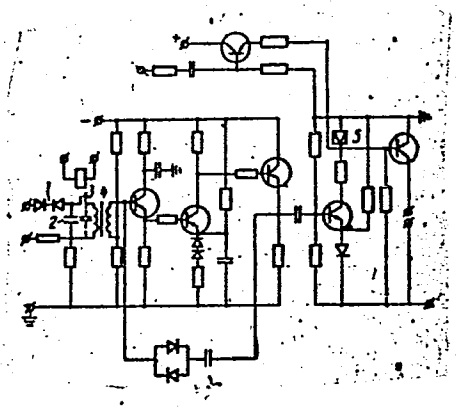

Fig. 1. 1 - Diode limiter;
2 - capacitor;
3 - normally open contact of relay;
4 - transformer;
5 - tunnel diode.

Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 21Sep64

jw

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SADYKOV, B.G.; SEMKINA, D.P.

Rhesus- and ABO-antigen interrelations of the blood of the mother and the fetus during nephropathy in pregnant women. Nauch. trudy Kaz. gos. med. inst. 14:533-534 '64. (MIRA 18:9)

1. I kafedra akusherstva i ginekologii (zav. - prof. R.G. Bakiyeva, nauchnyy rukovoditel' - prof.-konsul'tant P.V. Manenkov) Kazanskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

RUKHLYADEVA, A.P.; POLYGALINA, G.V.; SEMIKINA, L.I.

Vitamin and acid content of grain and potato vinasse. Trudy TSNIISP no.12:66-72 '62. (MIRA 17:3)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

RUHLYADEVA, A.P.; SEMIKINA, L.V.; CHEREDNICHENKO, V.S.

Quantitative chromatographic method for determining carbohydrates.
Trudy TSNIISP no. 13:14-18 '62. (MIRA 17:5)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

BUSHUYEV, Ye.S., inzh.; [illegible], Ye.

Principal causes of the appearance of laps on zinc coatings deposited by the dipping method. Sbor. nauch. trud. KGAU no.10: 353-361 '61. (MIRA 17:8)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

S/263/62/000/011/022/022
I007/I207

AUTHOR: Kogan, V. Kh. and Semikolennykh, A. N.

TITLE: Device for the graphical recording of γ-rays

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no. 11, 1962, 64, abstract 32.11.469. "Med. radiologiya", v. 6, no. 12, 1961, 56–58

TEXT: Brief description is given of a device for γ-topography designed in the radiological faculty of the Yaroslavskiy meditsinskiy institut (Yaroslavl Medical Institute); the device represents a scintillation-sensing element electrically connected with a Б-2 (B-2) type unit and mechanically, with a scanner. A photomultiplier of the ФЭУ 19-М (FEU 19-M) type is also included in the circuit. The sensing element has a lead shielding and a conical-channel collimator. A thin lead filter for scattered radiation was mounted in front of the scintillation sensing crystal. Each pulse from the scintillation-sensing element, transmitted through a scaler to an electromagnet is recorded on paper tape by strokes of the magnetic armature on carbon paper. The device described, has been used for X-ray records of a thyroid gland, after the patient received a radiation dose of 25 to 50 microcuries of I^{131}. There are 3 figures.

[Abstracter's note: Complete translation.]

Card 1/1

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

FEDOROV, L.T., kand.tekhn.nauk; LEONT'YEVSKIY, B.B.; GIL'DENBLAT, Ya.D., kand.tekhn.nauk; KORENISTOV, D.V.; ROSSINSKIY, K.I., kand.tekhn. nauk; KUZ'MIN, I.A., kand.tekhn.nauk; KONDRATSKAYA, A.A., inzh.; NISAR-MUKHAMEDOVA, G.N., inzh.; PANOVA, G.M., inzh.; ROZHDESTVENSKIY, G.L., inzh.; SEMIKOLENOV, A.S., inzh.; TSAREVSKIY, S.V., inzh.; ZHUKOVA, M.F., inzh.; GRISHIN, M.M., retsenzent; KRITSKIY, S.N., doktor tekhn.nauk, red.; MENKEL', M.F., doktor tekhn.nauk, red.; GALAKTIONOV, V.D., kand.geol.-min.nauk, red.; ZAVALISHIN, I.S., inzh., red.; MALYSHEV, N.A., inzh., red.; MIKHAYLOV, A.V., doktor tekhn. nauk, red.; PETROV, G.D., inzh., red.; RAPOPORT, Ya.D., red.; RUSSO, G.A., kand.tekhn.nauk, glavnyy red.; SEVAST'YANOV, V.I., inzh., red.; TITOV, S.V., inzh., red.; TISTROVA, O.N., red.; LARIONOV, G.Ye., tekhn.red.

[Hydrology and water economy of the Volga-Don] Gidrologiia i vodnoe knoziaistvo Volgo-Dona. Pod red. S.N.Kritskogo i M.F.Menkelia. Moskva, Gos.energ.izd-vo, 1960. 146 p. (MIRA 13:11)

1. Moscow. Vsesoyuznyy proyektno-izyskatel'skiy i nauchno-issledovatel'skiy institut "Gidroproyekt" imeni S.Ya.Zhuk. 2. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Grishin).
(Don River--Water resources development)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, I.N.

Installing a vacuum attachment on a centrifugal pump in order to start the pump without priming. Rats. i izobr. predl. v stroi. no.3:121-122 '57. (MIRA 11:1)

(Centrifugal pumps)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, N., polkovnik.

Problems in firing at moving ground targets by aiming ahead of them. (MIRA 10:10)
Voen.vest. 33 no.16:47-54 N '53.
(Shooting, Military)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, Nikolay Petrovich, polkovnik; VIL'CHINSKIY, I.K., podpolkovnik; redaktor; KUZ'MIN, I.E., tekhnicheskiy redaktor.

[Firing heavy machineguns] Strel'ba iz stankovykh pulemotov. Izd. 2-oe, ispr. Moskva, Voen. izd-vo Ministerstva obor. SSSR. 1955. 159 p. (Machineguns) (MLRA 9:5)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, N., polkovnik.

Organization and methods of marksmanship training. Voen.vest.35 no.5:36-43 My '55. (MIRA 9:7)
(Russia--Army--Target practice)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, N., polkovnik.

Bring firing regulations for small arms closer to modern combat conditions; as a subject for discussion. Voen.vest. 36 no.3:50-59 Mr. '57. (MIRA 10:10)

(Shooting, Military)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENKOV, Nikolay Petrovich, polkovnik, BONDARENKO, Fedor Grigor'yevich, polkovnik, KRASNER, Naum Yakovlevich, gvardii polkovnik, BLAGONRAVOV, A.A. akademik, general-leytenant artillerii zapasa, red.; VIL'CHINSKIY, I.K. polkovnik, red.; SOKOLOVA, G.F., tekhn.red.

[Principles of fire for infantry units] Osnovy strel'by iz oruzhiia strelkovykh podrazdelenii. Pod obshchei red. A.A. Blagonravova. Moskva, Voen. izd-vo M-va obor. SSSR, 1958. 266 p. (MIRA 11:9)
(Shooting)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, N., polkovnik

Posters on the principles of small arms fire. Voen.vest. 37 no.4:91-92 Ap '58. (MIRA 11:4)

(Shooting, Military)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SAVCHENKO, S.S., general-mayor; ALEKSANDROV, A.A., polkovnik; GRECHIKHIN, A.A., polkovnik; KOZLOV, A.F., polkovnik; KOZLOV, A.F., polkovnik; LOVI, A.A., polkovnik; LOSHCHILOV, A.A., polkovnik; MOLOCHKOV, A.K., polkovnik; MUTSYNOV, S.S., polkovnik; SEMIKOLENOV, N.P., polkovnik; SUDAKOV, S.V., polkovnik; SHINKAREV, G.M., polkovnik; VIL'CHINSKIY, I.K., polkovnik, red.; SOLOMONIK, R.L., tekhn. red.

[Methods of preparation to use weapons; firearms and grenade launchers]Metodika ognevoi podgotovki; strelkovoe oruzhie i granatometry. Moskva, Voenizdat, 1962. 318 p. (MIRA 16:2)

1. Russia (1923- U.S.S.R.)Armiya. Sukhoputnye voyska. Upravleniye boyevoy podgotovki voysk svyazi.
(Russia--Army--Firearms) (Grenades)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, N., polkovnik zapasa

Teach, but do not tutor; reply to the article by Colonel G. Slashchev "Recoilless weapons against tanks," published in No. 7, 1961. Voen. vest. 41 no.1:108-111 Ja '62. (MIRA 16:11)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 08772-66 EWT(d)/EWT(m)/EWP(k)/EWP(w) IJP(c) EM

ACC NR: AR6014201 (N) SOURCE CODE: UR/0271/65/000/011/B038/B038

AUTHOR: Maksimadzhi, A. I.; Markozov, G. V.; Semikolenov, V. N.; Chetyrkin, N. V.

TITLE: Calculation of amplitude-frequency characteristics (AFCh) of cargo ships on a "Minsk" digital computer 32B

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 11B302

REF SOURCE: Tr. Tsentr. n.-i. in-ta morsk. flota, vyp. 59, 1964, 3-13

TOPIC TAGS: cargo ship, computer application 26

ABSTRACT: The random nature of external loads and stresses in the ship-hull joints determines the random nature of stress safety factors. In order to use probabilistic criteria for practical purposes, their connection with the ship-strength characteristics should be established. In determining the fundamental parameters of distribution of external loads over the ship hull, it is assumed that, for a finite time, the processes in question are stationary and ergodic, and the single-dimensional laws of distribution of their ordinates are in satisfactory agreement with the normal law. The variation of the wave-profile ordinate constitutes the input in the problem; the heaving and pitching, bending moments, shearing force, and vertical pressure on the hull shell make up the output. The AFCh required in the calculations determines the properties of the ship as a dynamic system that

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOLENOV, Ye.Ya. (Sverdlovsk)

Standardization of the parts of men and boys' suits and coats. Shvein.prom. no.6:27 N-D '62. (MIRA 15:12)
(Clothing industry--Standards)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ACC NR: AP6021493 (A) SOURCE CODE: UR/0413/66/000/011/0143/0144

INVENTOR: Ryzhko, L. S.; Livanov, Yu. V.; Semikopenko, A. M.

ORG: None

TITLE: A fuel intake device. Class 63, No. 182541

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 143-144

TOPIC TAGS: fuel heating, engine fuel system, storage tank, filter

ABSTRACT: This Author's Certificate introduces a fuel intake device for fuel tanks used in transport vehicles. The device is heated by the fuel flowing from the force pump. The unit contains an intake and an overflow pipe which are coaxial. The intake is equipped with a screen filter located at the intake tube end. Air from the force pump is kept out of the fuel by perforating the overflow tube which surrounds the fuel delivery tube. The perforations are above the fuel intake. A tapered fitting is attached to the overflow pipe. This fitting has a wide opening above the perforations and a clearance with respect to the fuel intake.

UDC: 629.113

Card 1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

17(8)

AUTHOR: Semikopnyy, I.D., Lieutenant-Colonel of the Medical Corps

TITLE: A Device for Quick Examination of Night Vision

PERIODICAL: Voyenno-meditsinskiy zhurnal, 1958, [illegible], pp [illegible](USSR)

ABSTRACT: The author developed an improved device for examining night vision, which determines the growing of the initial period of dark adaptation, and the acuity of vision during illumination in accordance with various conditions of the night. The device permits [illegible] only the light excitability of the peripheral sections of the retina, but also the acuity of the central vision; to exclude the influence of the [illegible] of accomodation; to observe the eyes of the patients to be investigated during disadaptation and to [illegible] the results of investigating the acuity of vision and the growing of dark adaptation and to perform investigations at various illuminations without special [illegible].

Card 1/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

A Device for Quick Examination of Night Vision

The examination of night vision with the aid of the new device takes place in three phases: 1) the preliminary dark adaptation; 2) the light adaptation; 3) the examination of the light excitation and the acuity of night vision. The device is used in the Medical Corps of the Soviet Army and the Navy instead of the Kravkov-Vishnevskiy camera (Ref. 1). There are 2 diagrams, 1 photograph, 2 tables, and 1 Soviet reference.

Card 2/2

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ACCESSION NR: AT4042655 S/000/63/000/000/0065/0068

AUTHOR: Baranovskiy, V. V.; Semikopny°y, I. D.

TITLE: New method of studying spatial illusion

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy° konferentsii. Moscow, 1963, 65-68

TOPIC TAGS: spacial illusion, spacial orientation, vestibular analyzer, visual analyzer, vestibular mechanism, optokinetic stimulation, pilot selection

ABSTRACT: The orientation of a man in space involves primarily the interaction of the vestibular and visual analyzers. Consequently, any manifestation of illusionary sensations reflect a variation in this interaction. A method was developed for quantitatively determining individual tendencies towards illusionary sensations during space orientation which arise during the observation of moving objects. In nearly every case, it was observed that functional asymmetry of the labyrinth led to the development of illusion when subjects rotated their bodies more than 720 degrees while pacing in a fixed place for more than

Card 1/2

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ACCESSION NR: AT4042655

two minutes with closed eyes following optokinetic stimulation. The authors conclude that this test would be useful in the selection of pilots.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 03008-67

ACC NR: AP6033483 SOURCE CODE: UR/0413/66/000/018/0087/0087

43
B

INVENTOR: Semikopnyy, I. D.; Sobolev, V. V.

ORG: none

TITLE: Device for studying visual functions. 12 Class 30, No. 186076

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 87

TOPIC TAGS: visual function, vision, electric motor, human sense, OPHTHALMOLOGY, MEDICAL EQUIPMENT

ABSTRACT: An Author Certificate was issued for a device, used to study visual functions, which consists of an electric motor, stimulus sources, displayed test objects, and a current source. To provide objective examination of visual functions and numerical indication of results obtained in the display of moving and stationary objects, a contact mechanism controlling frequency and duration of illumination of the moving object, a display mechanism controlling the duration of display of the stationary object, and a mechanism for setting exposure time, which controls duration of intervals in the display of two successive stimuli (for example, light and sound), are installed in the device.

SUB CODE: 06/ SUBM DATE: 08Dec64/ ATD PRESS: 5099

awm

Card 1/1 UDC: 615.471.612. 843.7

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, F.P.

Welding pipes to boiler drums. Energetik 5 no.3:15 Mr '57.
(MLRA 10:3)

(Boilers--Welding)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, F.P., inzh.

Repair of a rotating air preheater. Energetik 9 no.3:7-10 Mr '61. (MIRA 14:7)

(Air preheaters—Repairing)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, F.P., inzh.

Reconditioning of a damaged boiler. Energetik 10 no.7:29-31 Jl '62.
(MIRA 15:7)

(Boilers--Maintenance and repair)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

GUSEV, Vladimir Petrovich. Prinimali uchastiye: SAKHAROV, M.A.; OBICHKIN, Yu.G.; FOMIN, A.V.; SEMIKOV, G.A.; NAZAROV, A.S.; ANDREYEVSKIY, M.N., retsenzent; KUNYAVSKIY, G.M., retsenzent; BLINNIKOV, I.V., retsenzent; BEREZNITSKIY, V.S., red.; SUKHANOV, Yu.I., red.; SVESHNIKOV, A.A., tekhn. red.

[Technology of the manufacture of radio electronic equipment] Tekhnologiia proizvodstva radioelektronnoi apparatury. Moskva, Izd-vo "Sovetskoe radio," 1961. 387 p. (MIRA 14:9)
(Radio—Equipment and supplies)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

KARASEV, B.G.; SEMIKOV, G.T.

Unipolar generator for a test stand. Elektrofiz. app. no.2: 151-159 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 07196-67 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/JG/EM/DJ

ACC NR: AT6031760 SOURCE CODE: UR/3092/66/000/004/0110/0115

AUTHOR: Andreyev, A. M.; Glukhikh, V. A.; Semikov, G. T.

ORG: none

TITLE: NA-1 and NA-500 ac electromagnetic pumps for transfering alkali metals

SOURCE: Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura, no. 4, 1966, 110-115

TOPIC TAGS: electromagnetic pump, alkali metal, liquid metal pump / NA1 electromagnetic pump, NA500 electromagnetic pump

ABSTRACT: Structural characteristics and performance characteristics are presented for two electromagnetic pumps used to transfer alkali metals. Both pumps consist of an operating channel and two inductors containing three-phase multiple pole windings. The inductors are assembled from sheet transformer steel and are mechanically secured on metal plates. The latter contain channels for cooling water. The excitation winding is of the double layer type with reduced pitch. Silicon-organic insulation of the winding permits a temperature rise up to 180°C. The operating channel of both pumps is made of stainless steel. Heat insulators are used to reduce the flow of heat to the inductors from the metal being transferred. Shorted copper busbars are used along the sides of the operating channel. The sides of the pumps are reinforc-

Card 1/2

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 07197-67 EWT(1)/EWT(m) WW/DJ

ACC NR: AT6031761 SOURCE CODE: UR/3092/66/000/004/0116/0122

AUTHOR: Ivanov, V. V.; Karasev, B. G.; Semikov, G. T.

43
B+1

ORG: none

TITLE: Induction pumps with rotating poles

SOURCE: Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura, no. 4, 1966, 116-122

TOPIC TAGS: induction pump, liquid metal pump, alkali metal

ABSTRACT: Work at the NIIEFA institute on the development of electromagnetic pumps with rotating poles for transfering alkali metals and their alloys is described. A detailed description is given of one of the pumps. The magnetic system of pumps with rotating poles does not differ in principle from the magnetic system of synchronous machines. Special features involve a large air gap, a large number of ampere turns and large excitation coils. The electromagnetic pump described has a capacity of three cubic meters per hour when pumping an Na-K alloy at an operating pressure of 4.5 kg/cm^2. It operates at a maximum metal temperature of 500°C and is cooled by means of a centrifugal fan installed on the rotor. The nominal speed is 1500 rpm; the excitation voltage is 110 volts and the efficiency is 10.7%. The pump weighs 65 kg. The stator, rotor and pump channel are described. Certain structural peculiarities of

Card 1/2

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, T.T.

Analytical method for approximate determination of envelopes on the detector output associated with random pulse form at the input. Trudy TSNIIMF no.23:42-50 '59. (MIRA 12:8)
(Radio detectors)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, T.T.

Selections of amplitude characteristics for radar receivers used in ice reconnaisance. Trudy TSNIIMF no.23:51-55 '59. (MIRA 12:8)

(Radar meteorology) (Ice on rivers, lakes, etc.)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

S/194/61/000/010/075/082
D271/D301

AUTHOR: Britsin, S.S. and Semikov, T.T.

TITLE: Trials of the ship radar station "Donets"

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 36, abstract 10 K263 (Inform. sb. tsentr. n.-i. in-t morsk. flota, 1960, no. 48, 18-26)

TEXT: Basic parameters are described of an experimental station, of developmental low power transmitter and slot antenna; comparative data table is given of Soviet ship radars "Neptun", "Stvor", "Don" and "Donets"; results of detection of various objects are given, with transmitters of 100 and 15 kW power, and various antennae. Having successfully passed the trials, the station is recommended for bulk production and use in sea-going ships. 1 figure. [Abstracter's note: Complete translation]

Card 1/1

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

S/194/61/000/010/078/082
D271/D301

AUTHOR: Semikov, T.T.

TITLE: Application of corner reflectors in navigation

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 37, abstract 10 K266 (Inform. sb. tsentr. n.-i. in-t morsk. flota, 1960, no. 57, 3-16)

TEXT: Basic parameters are considered of passive reflectors and their construction (flat plate, two and three-sided corners, sphere, multi-sided corner reflector). Directional patterns of various types of reflectors are given. The dependence is analyzed of radar visibility of reflectors on their dimension and the height of mounting, production quality, surface nature, directivity of radar antenna and meteorological conditions. The application of reflectors as navigational signposts and in lifeboats is pointed out. 13 figures. [Abstracter's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

BYKOV, Vladimir Ivanovich; KUKLIN, Yuriy Ivanovich; NIKITENKO, Yuriy Ivanovich; CHERNYAYEV, R.N., kand. tekhn. nauk, retsenzent; SEMIKOV, T.T., kand. tekhn. nauk, red.; FRISHMAN, Z.S., red. izd-va; KOTLYAKOVA, O.I., tekhn. red.

[Visual radio direction finder on ships] Sudovye vizual'nye radiopelengatory. Leningrad, Izd-vo "Morskoi transport," 1962. 104 p. (MIRA 15:7)
(Radio direction finders)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 10499-65 EEO-2/FSF(b)/EGT(1)/EEC(t)/EED-2 Pm-4/Pn-4/Pac-4/Pi-4/Pj-4/
Pk-4/Pl-4 RAEM(i)/RAEM(a)/SSD/AFETR/APGC(b)/RAEM(c)/ASD(a)-5/AFWL/BSD/
ESD(t)/RAEM(t) WR

ACCESSION NR: AR4046022 S/0274/64/000/007/B049/B049

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodnyy tom, Abs. 7B303

AUTHOR: Semikov, T. T., Shchegolev, V. I.; Bibichkova, R. P.

TITLE: Automatic radar transponder "Ogonek"

CITED SOURCE: Inform. ab. Tsentr. n.-i. in-ta morsk. flota, vyp. 98, 1963, 3-25

TOPIC TAGS: transponder, radar, ship navigation / Ogonek transponder

TRANSLATION: Difficulties in recognizing the objects visible on a shipborne-radar screen are considered. Among possible solutions, the most promising is the building of the radar transponders which would send coded response upon being interrogated by a ship radar. Peculiarities of foreign transponder designs are considered; a Soviet design is described, and tactical and technical data of the "Ogonek" transponder is supplied. A transponder block diagram and functioning of its units are considered in detail. Test results of the "Ogonek" transponder in the Azov Sea and in the Kerch Strait in 1961-62 are reported. Possible navigational uses of the transponder are indicated; identification of easy-slope

Card 1/2

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L 10499-65 AR

ACCESSION NR: 4046022

shores which fail to produce echo signals on the radar screen, identification of markers, floating beacons, ships, and operation as autonomous radar approaches. Thirteen illustrations.

SUB CODE: NG ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, T., kand. tekhn. nauk

Testing of marine radar responder-beacons at sea. Mor. flot 23 no.8:17-19 Ag '63. (MIRA 16:11)

1. Ispolnyayushchiy obyazannosti nachal'nika sektora radionavigatsii TSentral'nogo nauchno-issledovatel'skogo instituta morskogo flota.

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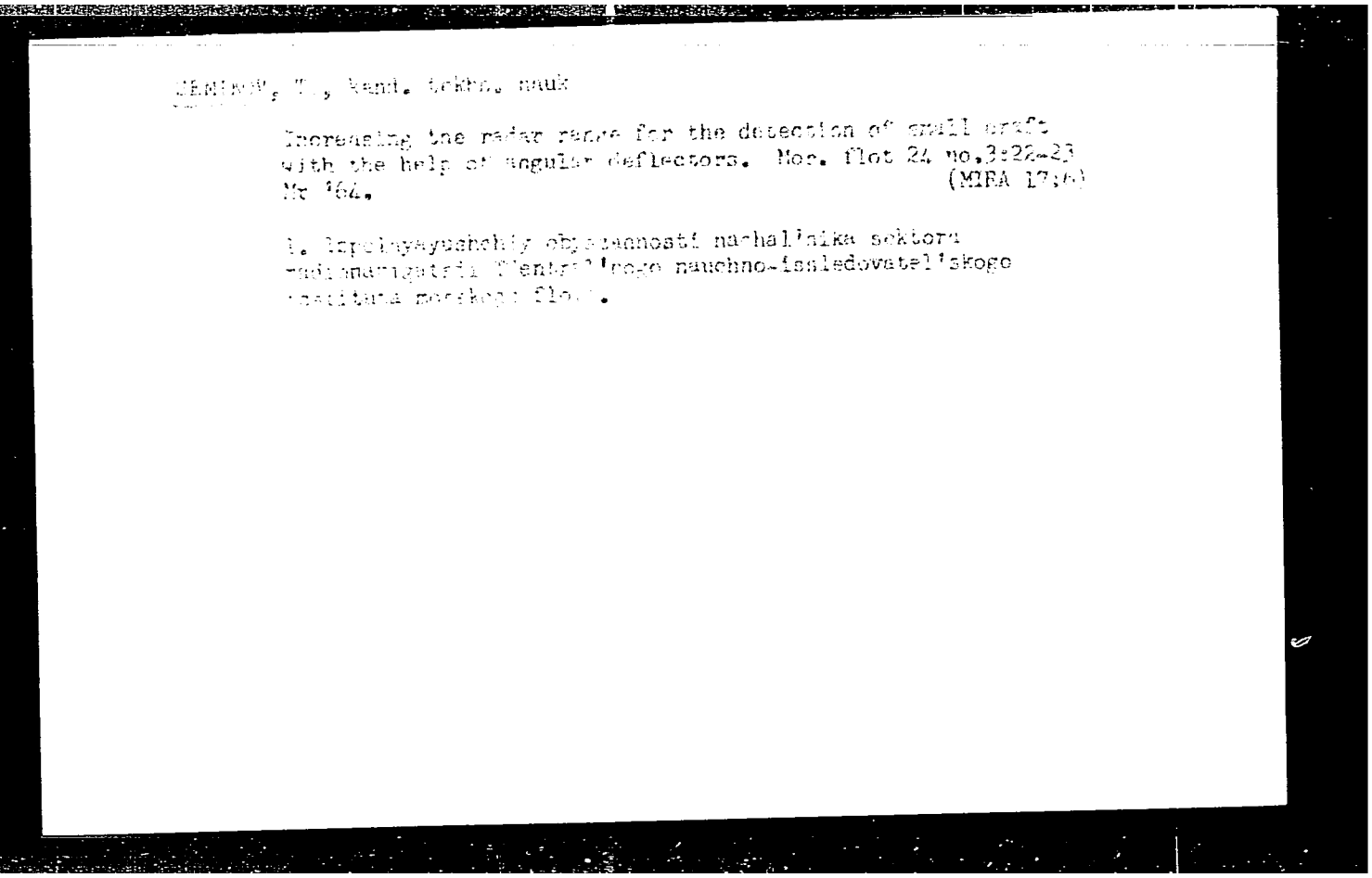

[illegible], T., kand. tekhn. nauk

Increasing the radar range for the detection of small craft with the help of angular deflectors. Mor. flot 24 no.3:22-23 Mr '64. (MIRA 17:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut morskogo flota.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 4130-66 EWT(d)/FSS-2/EWT(1) BC/WR

ACCESSION NR: AR5014659 UR/0274/65/000/005/B039/B039
621.396.969:621.396.988

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Sv. t., Abs. 5B271

AUTHOR: Semikov, T. T.; Shchegolev, V. I.; Demin, I. D.

TITLE: Modern radar means used in sea navigation

CITED SOURCE: Inform. sb. Tsentr. n.-i in-t morsk. flota, vyp. 120, 1964, 3-14

TOPIC TAGS: radar, radar navigation

TRANSLATION: Increased reliability, better display methods, using radar for automatic control of ship propelling are the main trends in development of the ship radar. Small-size simplified-design radars weighing 50—60 kg are held necessary. To improve the definition of radar pictures, the electron-beam tubes having a high resolution, or a memory, or a color phosphor are used. Simultaneously, with the radars, auxiliary devices are being developed for a semiautomatic course laying in passing ships. The output of such an automatic system must be connected with the automatic steering mechanism and with the

Card 1/2

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

L 4130-66
ACCESSION NR: AR5014659

control mechanism of the main engine. The resolution is improved by a needle-beam system. The use of lasers and other shf transformers with a wide range of electronic tuning is also possible. Development of methods for automatic processing of radar data is expedient. Automatic shore radars controlled from a dispatcher's center and reporting to it their data are being developed. Tabs. 2.

SUB CODE: NG, DC ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, T.T., kand.tekhn.nauk; SHCHEGOLEV, V.I., kand.tekhn.nauk;
BIBICHKOVA, R.P.

The automatic signal returning radar beacon "Ogonek." Inform.
sbor. TSNIIMF no.98 Sudovozh. i sviaz' no.23:3-23 '63.
(MIRA 18:11)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, T.T., kand. tekhn. nauk; SHCHEGLEV, V.I., kand. tekhn. nauk; DEMIN, I.D.

Modern radar equipment in marine navigation. Inform. sbor. TSNIIMF no. 120. Sudovozh. i sviaz' no. 27:3-14 '64 (MIRA 19:1)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ACC NR: AR6034815 (N) SOURCE CODE: UR/0398/66/000/008/V016/V016

AUTHOR: Semikov, T. T.

TITLE: Increased reliability of ship's radar equipment

SOURCE: Ref. zh. Vodnyy transport, Abs. 8V109

REF SOURCE: Inform. sb. Tsentr. n.-i. in-t morsk. flota, no. 31(141), 1965, 18-23

TOPIC TAGS: ship, ship navigation, navigation equipment, radar/Kelvin Hughes radar station, Canberra liner

ABSTRACT: It is pointed out that the duplication of individual instruments of a radar station (RLS) is one of the most effective means of increasing reliability. Therefore, two radar stations are frequently installed on a ship. It is found to be more rational to combine these stations into a single radar system (RS) with parallel joining of similar instruments. If one of these fails, a switching device actuates a similar block from the reserve set. The combining of stations with varying features (for instance with different wave ranges) into a single radar station, not only increases reliability but broadens the navigation possibilities of the radar station. The

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ACC NR: AR6034815

"Kelvin Hughes" radar station installed on the "Canberra" liner, includes 2 antennas, 2 receivers-transmitters, 3 indicators, and 2 transformers. In the course of 3000 hours of operation, the station had 21 failures, 8 of which were of serious nature. The average number of hours before failure occurred amounted to 145 hours, but in consideration of major failures it was 375 hours. Reserve blocks and switching devices have made possible a normal operation of both indicators at all times. Duplication of basic parts of the radar station makes further duplication of individual assemblies unnecessary. Therefore, when developing new radar stations, it is indispensable to attain a maximum antonomy of the assemblies so that in case of a failure in one of these, observation of the surrounding conditions can be ensured. Orig. art. has: 1 figure. R. Chernyayev. [Translation of abstract]

[GC]

SUB CODE: 13, 17/

Card 2/2

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOV, Ye.A., otv. red.

[Methodological instructions on geodetic work for layout purposes] Metodicheskie ukazaniia po proizvodstvu geodezicheskikh rabot dlia perenesseniia proektov na mestnost'. Izd.2., perer. Leningrad, 1962. 59 p. (MIRA 17:7)

1. Moscow. Gosudarstvennyy institut po proyektirovaniyu lesnogo transporta. 2. Nachal'nik otdela aerofotoizyskaniy Gosudarstvennogo instituta po proyektirovaniyu lesnogo transporta.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOVA, A.I.

103-12-12/12

AUTHOR: Semikova, A. I.

TITLE: Report on the Scientific Seminar on Pneumo-Hydraulic Automation (Nauchnyy seminar po pnevmo-gidravlicheskoy avtomatike).

PERIODICAL: Avtomatika i Telemekhanika, 1957, Vol. 18, Nr 12, pp. 1148-1150 (USSR)

ABSTRACT: At the Institute for Automation and Remote Control (IAT) of the Academy of Science of the USSR the All Union Seminar for Automation by hydraulies and compressed air began its activities, which was organized by the Laboratory for Automation by hydraulics and compressed air of the Institute under the direction of Professor Doctor of the Technical Sciences M. A. Ayzerman. The Seminar includes the specialists in the domain of automation by hydraulics and compressed air, who work in the design-offices, in scientific research and educational institutes, and in plants. The purpose of the Seminar is mutual exonange of the investigations conducted in this field in the various organizations of the USSR, and a discussion of new research and elaborations. Conferences of the seminar are held twice a year in the form of two-day sessions. The first of these was held on May 28th-29th 1957. 175 persons took part in it. 24 lectures and communications

Card 1/4

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

Report on the Scientific Seminar on Pneumo-Hydraulic Automation.

of the characteristics of a flat valve of the nozzle-flap type. I. F. Kozlov (NIITeplopribor, Moscow) reported on the construction of pressurized air apparatus of small dimensions for automation. M. S. Shneyerov (KB Tsvetmetavtomatika, Moscow) talked on the construction of pressurized air apparatus for strongly aggressive media. V. L. Podgoyetskiy KB Tsvetmetavtomatika, Moscow) reported on the construction of a three component regulator. I. M. Braverman (KB Tsvetmetavtomatika, Moscow) talked on the investigation of the characteristics of the three component regulator. Yu. V. Krementulo (IAT AN SSSR) reported on the construction of electropneumatic transformers. G. T. Berezovets (IAT AN SSSR) reported on the construction of a pressurized air regulator without a mechanical divider. T. K. Berends (IAT AN SSSR) reported on an apparatus for the automatic adaption of the an pressurized air regulator to the regulated object on an change of load. V. S. Prusenko reported on the project of an automatic installation for the air supply of systems of industrial automation by pressurized air. Yu. I. Ostrovskiy (IAT SSSR) talked on "extremum pressurized air regulators" with a memory for maxima. L. S. Bron talked on hydraulic

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

Report on the Scientific Seminar on Pneumo-Hydraulic Automation

equipment of automatic assembly line. V. M. Dvoretskiy (IAT AN SSSR) talked on a scheme based on the principe force compensation. V. P. Temnyy (IAT AN SSSR) reported on the scheme and the principle of the operation of a hydraulic observation motor. V. A. Khokhlov (IAT AN SSSR) gave a summary of hydraulic power amplifiers. A. V. Bogacheva reported the results of the theoretical and experimental investigations of the air flow in capillary tubes. A. F. Arkhangel'skiy (Kirovskiy zavod, Chelyabinsk) talked on a "hydraulic universal velocity regulator" (URS) and its application in national economy. B. F. Stupak (Leningrad) talked on a "review on constructions and elements of hydraulic motors which were constructed in the NII of the shipbuilding industry."

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SOV/30-58-6-35/45

AUTHOR: Semikova, A. I.

TITLE: Discussion of Problems of Pneumatic-Hydraulic Automation (Obsuzhdeniye problem pnevmogidroavtomatiki)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 6, pp. 123-124 . (USSR)

ABSTRACT: At the Institute of Automation of the AS USSR the second conference in this field was held from March 17 - 19. It was attended by scientific collaborators and engineers dealing with problems in various branches of Soviet industry as well as by foreign specialists. 32 lectures and reports were delivered on theoretical and practical problems in this field. Among others the following reports were delivered:

1) V. A. Nikitin: On the pneumatic aggregate (AUS).
2) V. V. Volgin: On the results obtained by investigations of the dynamic characteristics of pneumatic controls.
3) V. N. Veller: On hydraulic rational control schemes.
4) Ye. F. Alekseyev: On the dynamics of the rotating-piston hydro-drives.

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Discussion of Problems of Pneumohydroautomation

5) I. Z. Zaychenko: On problems concerning the dynamic stability of pneumatic and pneumohydraulic drives.
6) E. M. Nadzhafov and A. A. Tal': On the production of computers.
7) L. A. Zalmanzon: On works for the production of an aerodynamic oscillation generator.
8) V. D. Mironov: On the operation of an electronic hydraulic regulator.
9) V. I. Gusakov: On hydraulic mechanisms.
10) B. L. Korobochkin: On automatic control.
11) D. Kveton, chief constructor of the "Regula-vivoy" works (Czechoslovakia): On the general direction followed by the works there.
12) Ya. Khampl: On the construction of electro-hydraulic control of the "Křižik-Smichov" works in Prague.
13) V. Britall: On two control mechanisms produced in the German Democratic Republic.
14) V. Ferner (German Democratic Republic): On the advantages of a pneumatic system for low pressure.
15) Lu Yuan'-tsin: On the development of work in this field in the Chinese People's Republic.

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SOV/ 30-58-6-35/45

Discussion of Problems of Pneumohydroautomation

Various models and apparatus were shown at an exhibition organized in conjunction with this conference.

ASSOCIATION: Institut avtomatiki i telemekhaniki
(Institute of Automation and Telemechanics)

1. Pneumatic systems--Control systems 2. Hydraulic systems--Control systems 3. Industrial production--Theory

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SEMIKOVA, A.I.

Scientific seminar on pneumatic and hydraulic automation.
Avtom. i telem. 19 no.10:988-991 O '58. (MIRA 11:11)
(Automatic control)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

28(1) PHASE I BOOK EXPLOITATION SOV/2702

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.
Seminar po pnevmogidravlicheskoy avtomatike. 1st, Moscow, 1957

Sistemy, ustroystva i elementy pnevmo- i gidravlicheskoy avtomatiki; [Sbornik] (Pneumatic and Hydraulic Circuits, Devices, and Elements in Automation; Collection of Papers) Moscow, Izd-vo AN SSSR, 1959. 233 p. Errata slip inserted. 2,700 copies printed.

Resp. Ed.: M. A. Ayzerman, Doctor of Technical Sciences, Professor; Ed. of Publishing House: A. A. Tal'; Tech. Ed.: T. P. Polyakova.

PURPOSE: This collection of papers is intended for scientific research workers and engineers in the field of design and construction of pneumatic and hydraulic equipment and accessories for automation.

COVERAGE: This collection contains papers read at the Seminar on Pneumatic and Hydraulic Devices for Automation, May 28, 1957. 1) The collection is divided into the following three groups: 1) newly developed pneumatic and hydraulic circuits 2) pneumatic and hydraulic devices, including regulating units, transmitters and transducers, actuating mechanisms, special-purpose devices, and auxiliary equipment and 3) elements of pneumatic and hydraulic devices for automation, such as controlled and permanent nozzles and diaphragms. No personalities are mentioned. References follow several of the papers.

Berezovets, G. T. [Moscow]. Pneumatic Ratio Controllers 122
Without Mechanical Dividers
Types BS.1 and RS-2 ratio controllers are described. The change of ratio in relation to the throttle opening and the primary pressure is discussed.

Zalmanzon, L. A., and A. I. Sankovn [Moscow]. Designing a Non-linear Transformation in Pneumatic Systems by Means of Nozzle-Tube Type Elements 128
This paper discusses the first stage of an investigation made at the Laboratory for Pneumatic and Hydraulic Automation, IAT AN SSSR. The characteristics of a pneumatic nozzle-tube-type relay consisting of a nozzle and pitot tube are described. The functioning and possible uses of this device are dealt with. Schematic diagrams of the relay and photographs of the experimental installation are shown.

Berends, T. K., and A. A. Tal' [Moscow]. Possibility of Constructing a Pneumatic Regulator With Automatic Response to Load Changes 148

Ostrovskiy, Yu. I. [Moscow]. Extremal Pneumatic Regulator, IAT AN SSSR 155
The basic principles of an extremal regulator for maintaining certain maximum or minimum values in an automated system are discussed. A schematic diagram is presented, and the construction is described. Results of laboratory testing are given.

Auxiliary Equipment

Prusenko, V. S. [Moscow]. Automatic Installation for Compressed Air Supply 165
A description is given of an installation with units of simple construction (rotary liquid piston compressor and two-stage dehydrator) for securing a continuous supply of clean and dry compressed air.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ZAIMANZON, L.A. (Moskva); SEMIKOVA, A.I. (Moskva)

Investigating the properties of jet elements used in pneumatic automatic control systems [with summary in English]. Avtom. i telem. 20 no.4:447-467 Ap '59. (MIRA 12:5)
(Automatic control) (Pneumatics)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOVA, A.I.

PHASE I BOOK EXPLOITATION SOV/4671

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki. Seminar po pnevmogidravlicheskoy avtomatike. 2d and 3d session

Voprosy pnevmo- i gidro- avtomatiki (Problems in Pneumatic and Hydraulic Automation) Moscow, 1960. 211 p. Errata slip inserted. 4,500 copies printed.

Resp. Ed.: M.A. Ayzerman, Doctor of Technical Sciences, Professor; Ed. of Publishing House: A.A. Tal'; Tech. Ed.: S.G. Tikhomirova.

PURPOSE: This collection of articles is intended for scientific workers, industrial designers and engineers interested in automation and telemechanics.

COVERAGE: The collection of 23 articles is a continuation of an earlier work of the Academy of Sciences USSR, on pneumatic and hydraulic automation systems, published in 1959. A wide range of problems connected with the design and operation of pneumatic and hydraulic automation equipment is described. An addition to problems based on experiments, the collection also contains discussions of new trends in the field, such as the possibility of using very low pressure for the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

operation of pneumatic devices. Some articles of this collection were written in the German Democratic Republic and in Czechoslovakia and reflect a somewhat different approach to automation problems. No personalities are mentioned. References accompany most of the articles.

TABLE OF CONTENTS:

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

PNEUMATIC COMPUTING-SOLVING AND SCANNING DEVICES

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEDYKOVA, P.I.

TM&M I BOOK EXPLOITATION SOV/4403

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki

Avtomaticheskoye upravleniye; [sbornik rabot] (Automatic Control; Collected Works) [Moscow] Izd-vo AN SSSR [1960] 431 p. Errata slip inserted. 5,500 copies printed.

Ed.: Ya.Z. Tsypkin, Doctor of Technical Sciences, Professor; Ed. of Publishing House: Ye.F. Grigor'yev; Tech. Ed.: G.A. Astaf'yeva.

PURPOSE: This collection of reports is intended for scientists and engineers engaged in the study of automation.

COVERAGE: The collection contains reports presented at the 6th Conference of Young Scientists of the Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics of the Academy of Sciences USSR) in January 1959. The collection covers a wide range of scientific and technical problems connected with automatic control. No personalities are mentioned. References accompany each report.

Sedykova, P.I., and V.I. Chernyshev. Nonlinearless Pneumatic Pressure Amplifiers 223

The authors discuss the design and operation of elements which permit a new solution of problems connected with designing pneumatic computers and control systems. These elements should be free of some of the defects characteristic of existing pneumatic regulators equipped with rubber and fabric-made membranes. There are no references.

Silayev, V.N. Generator for Nonmutual Telemechanical Systems With an Asynchronous Power Supply 229

The author divides existing nonmutual telemechanical systems with time channel separation which use an asynchronous power supply into two groups: (1) those which require a selected (time or frequency) communication channel for synchronizing and symphasing; (2) those which are synchronized by means of "working" pulses. An asynchronous power supply for telemechanical systems with time channel selection becomes more economical and simpler if the time channel is also used for synchronization and symphasing for which there are two possible variants. In the first variant the driven generator starts and runs normally only at the beginning of each alternate cycle. To exchange of information between dispatching and checking points. This is achieved by sending a special triggering pulse from the dispatching point and by sending, during transmission, synchronizing pulses at equal intervals which are common multiples of the oscillation period of the generator. The second variant differs from the first by the absence of synchronizing pulses during cycle transmission, i.e., it represents a start-stop synchronizing system of the driven generator which has the same frequency as the driving generator. This variant of asynchronous power supply is discussed in the report. It is distinguished by its simplicity and with the use of a high stability generator, it can ensure reliable telecontrol operation. There are 7 references, all Soviet (including 1 translation).

Strelkov, B.S. Some Possible Methods of Designing Translatorized Components for Digital Computers 241

This report suggests methods for designing a universal logical circuit "OR - not OR" and a trigger for two other types of links between the components, namely the pulse link and the mixed pulse - potential links. The author finds it possible to build such circuits using only one transistor which in turn simplifies the components design. He also makes suggestions on how to realize triggering at the calculating unit input in the asymmetric type of triggers for both cases of linking between components. He suggests how to obtain low output resistance of the asymmetric static trigger in both its states. The possibility of realizing the suggested circuits was proved by experimental checking which gave satisfactory results. There are 5 references: 2 Soviet, and 3 English.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOVA, A.I.

Seminar on pneumatic and hydraulic automatic control systems.
Avtom. i telem. 22 no.11:1550-1552 N '61. (MIRA 14:12)
(Pneumatic control) (Hydraulic control)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOVA, A.I.

A conference on pneumatic and hydraulic control. Vest.AN SSSR 31 no.9:120 S '61. (MIRA 14:10)
(Hydraulic control) (Pneumatic control)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

SEMIKOVA, A.I.

Conference on hydraulic and pneumatic control. Avtom.i telem. 23 no.12:1720-1723 D '62. (MIRA 15:12)
(Pneumatic control—Congresses)
(Hydraulic control—Congresses)

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

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78219
SOV/80-33-3-20/47

AUTHORS: Rotinyan, A. L., Semikozov, G. S.

TITLE: Experimental Checking of the Electrochemical Method of Removing Impurities From Electrolytes

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3, pp 622-627 (USSR)

ABSTRACT: The purification of a nickel electrolyte from copper admixture was made by a preliminary electrolysis in a bath equipped with a pure nickel cathode and a graphite anode. The rate of discharge of the impurity at the cathode was determined by Eq. (1):

$$I_l = K_{d_i} \cdot S \cdot C_{i_b} \qquad (1)$$

where I_l is the limiting current; S is the cathode

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

surface; C_{i_b} is the concentration of the impurity in the bath; K_{d_i} is the convective diffusion constant. The flow of the electrolyte being designated by Q ml/sec and the original concentration of the impurity in the electrolyte by $C_{i_{or}}$, the material balance of the electrolysis can be expressed by Eq. (2):

$$Q \cdot C_{i_{or}} = Q \cdot C_{i_b} + K_{d_i} \cdot S \cdot C_{i_b} \qquad (2)$$

from which the following relationship can be derived:

$$C_{i_{or}} / C_{i_b} = 1 + K_{d_i} \cdot S/Q \qquad (3)$$

The left side of Eq. (3) characterizes the extent of

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the elimination of the impurity from the original electrolyte. However, as some amount of the base metal is also precipitated at the cathode together with the impurity, the degree of purification is better expressed by the relationship:

$$C_{i_{or}}/C_{i_b} : C_{M_{or}}/C_{M_b}$$

where M designates the base metal (in this instance, nickel). As $C_{M_{or}} / C_{M_b} \cong 1$ in all instances, the ratio $C_{i_{or}} / C_{i_b}$ expresses the degree of purification with sufficient accuracy. It was established that the degree of purification is governed by the following laws: (a) It does not depend on the pH of the electrolyte for the pH between 0.5 and 4; (b) the value of K_{d_i}, and consequently the degree of purification,

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increased 5-fold when the electrolyte was mixed energetically with an air stream; (c) the degree of purification was independent of temperature changes in the range of 10-50° C; (d) the degree of purification increased linearly with the cathode surface; (e) it did not depend on the current density; (f) it decreased with increasing rate of flow of the electrolyte. The value of K_{d_i} was constant in all of the experiments; its mean value was $0.38\ 10^{-3}$. There are 8 figures; and 11 Soviet references.

SUBMITTED: October 29, 1959

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ROTINYAN, A.L.; SEMIKOZOV, G.S.

Method for the electrochemical purification of an electrolyte and its experimental verification. Zhur. prikl. khim. 33 no.12:2712-2718 D '60. (MIRA 14:1)

1. Kafedra elektrokhimii Leningradskogo tekhnologicheskogo instituta imeni Lensoveta.

(Electrolytes)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

KALINKIN, I.P.; SEMIKOZOV, G.S.

Colorimetric determination of microquantities of copper in nickel and cobalt solutions. Zav.lab. 27 no.1:17-20 '61. (MIRA 14:3)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Copper--Analysis) (Nickel--Analysis)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

S/080/60/033/012/0[illegible]0/024
D209/D305

AUTHORS: Rotinyan, A.L., and Semikozov, G.S.

TITLE: Method of electrochemical purification of an electrolyte and its experimental examination

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 12, 1960, 2712 - 2718

TEXT: This is a report on a series of experiments, performed on the removal of copper impurity from nickel electroplating solution by low current density electrolysis, for investigating the influence of a number of purification tanks, the rate of flow of electrolyte, and the cathode surface on the degree of purification in the continuous treatment, and the influence of duration of purification and air agitation on the degree of purification in the batch treatment, and to prove that the experimental data are in agreement with theoretically derived equations. The present work is a continuation of an earlier investigation by the authors (Ref.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

Method of electrochemical ...

1: ZhPKh, XXXIII, 3, 622, 1960), A.L. Rotinyan, V.L. Kheyfets (Ref. 2: Tr. inst. Gipronikel', 3, 309, 1958). The arrangement for carrying out the experiments was described in the previous article (Ref. 1: Op.cit.). When low cathode current density is applied, nickel is not deposited from nickel electroplating solution but the copper contained in the nickel solution as impurity is plated out. Low current density purification can be carried out in two ways, either as a batch treatment, or as a continuous treatment. In the continuous treatment the flow of nickel electroplating solution is so arranged that it circulates continuously between the electroplating tank in which nickel plating processes are carried out normally, and between purification tank which copper impurity is removed by low current density electrolysis. The batch treatment is carried out in the main electroplating tank when the solution is not in use, i.e. when the nickel plating is not carried out. The solution maintained for all experiments at the temperature of 20°C contained 127 ± 3 g/liter of nickel and 9.6 ± 0.6 g/liter of copper as impurity. In the previous article (Ref. 2: Op.cit.)

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Method of electrochemical ...

$$\frac{c_{initial}}{c_{final}} = \text{[illegible]} + \frac{K_{g_i} S}{Q} \qquad (1)$$

was derived for the degree of purification expressed as the ratio $\frac{c_{initial}}{c_{final}}$ i.e. by the ratio $\frac{\text{the initial concentration of impurity}}{\text{the final concentration of impurity}}$ i.e. the impurity concentration in the solution flowing into the purification tank / i.e. the impurity concentration in the solution flowing out of the purification tank, where K_{g_i} - the coefficient of rate of convection diffusion of impurity ions; S - the cathode surface in the purification tank; Q - the rate of flow of electrolyte through the purification tank. The assumption was made that the nickel concentration during electrolysis was constant and that the impurity concentration in the whole volume of solution is uniform. In case "2"

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Method of electrochemical ...

when applying several tanks in series of the same dimensions and with cathode surface in each tank S the degree of purification is expressed by the following equation

$$\frac{c_{initial}}{c_{final}} = 1 + \left(\frac{K_{g_i} S}{Q}\right)^n . \qquad (2)$$

In case "3" when applying several tanks in series by dividing the purification tank into equal compartments with cathode surface $S_n = \frac{S}{n}$ the degree of purification is expressed by the following equation:

$$\frac{c_{initial}}{c_{final}} = 1 + \left(\frac{K_{g_i} S}{Q_n}\right)^n . \qquad (3)$$

The ratio $\frac{\text{initial nickel concentration}}{\text{final nickel concentration}}$ is practically independent on the number of tanks used in purification, and on the number of

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Method of electrochemical ...

compartments made in one tank. The rate of impurity removal = "w" in the batch treatment is expressed by the equation

$$w = K_{g_i} Sc_{final} \quad (4)$$

and by

$$w = - V \frac{dc_{final}}{d\tau} \quad (5)$$

where c_{final} - impurity concentration at time "τ"; V - volume of electrolyte in the tank. By comparing Eq. (4) and Eq. (5)

$$- \frac{dc_{final}}{c_{final}} = \frac{K_{g_i} S}{V} d\tau. \quad (6)$$

After integration

$$\ln \frac{c_{initial}}{c_{final}} = \frac{K_{g_i} S\tau}{V}. \quad (9)$$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

Method of electrochemical ...

Fig. 3 represents the dependence of copper concentration in milligrams/liter on the time of purification in hours by batch treatment in one tank of volume equal to 585 cm^3. By plotting

$$\log \frac{c_{initial}}{c_{final}}$$

calculated from experimental results represented in Fig. 3, against time of purification, a straight line is obtained which is in agreement with theoretical Eq. (9). In order to compare the efficiency of continuous treatment sufficient to give the same degree of purification as in the batch treatment was calculated. For the chosen operating conditions in the continuous treatment, 2 purification tanks in series with the same cathode surface as in the batch treatments give the same degree of purification expressed by ratio $\frac{c_{initial}}{c_{final}}$ as in the batch treatment. In the case of division of the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

Method of electrochemical ...

purification tank into compartments for the same degree of purification, i.e. if $\frac{c_{initial}}{c_{final}}$ is the same in Eq. (3) and Eq. (9)

$$\frac{K_{g_i} S\tau}{V} = n \ln \left(1 + \frac{K_{g_i} S}{Q_n}\right) \qquad (12)$$

and

$$\frac{K_{g_i} S}{Q_n} = \ln \left(1 + \frac{K_{g_i} S}{Q_n}\right) \qquad (13)$$

Denoting $\frac{K_{g_i} S}{Q_n}$ by x, $x = \ln (1 + x)$, (14); $e^x = 1 + x$, (15); for $x = 0$, $n = \infty$. Expanding e^x in series the number of compartment "n" was calculated with 1 % error to be 20. The batch treatment is more efficient but the continuous treatment is recommended for highly

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

Method of electrochemical ...

productive installations where little shut-down time is available for carrying out the batch treatment. Coefficient of convection diffusion K_{g_i} increases thus leading to better purification when air agitation is improved by increasing the number of holes in the air pipe situated at the bottom of the tank maintaining the same quantity of air passing through the solution in unit time. Air agitation has a lesser effect on the decrease in concentration polarization than that of cathode agitation. It is known that

$$\delta = \frac{1}{u^k} \qquad (17)$$

where u - rate of movement of fluid; k - coefficient dependent on the conditions of experiment. For movement of fluid in the laminar layer at the cathode k = 0.5. Assuming that the rate of movement of fluid at the cathode is proportional to the amount of air used for agitation

$$\delta = \frac{D}{K_{g_i}} \simeq \frac{1}{u^k} \simeq \frac{1}{i^k} \qquad (18)$$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

$$\ln K_{g_i} \simeq k \ln q, \qquad (19)$$

By plotting log K_{g_i} against log q a straight line is obtained with the slope k - 0.5 which proves that air agitation does not move the laminar layer at the cathode. There are 1 table, 5 figures, and 3 Soviet-bloc references.

ASSOCIATION: Kafedra elektrokhimii Leningradskogo technologicheskogo instituta im. Lensoveta (Leningrad Technological Institute im. Lensovet, Department of Electrochemistry)

SUBMITTED: June 21, 1960

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

ALESKOVSKIY, V.B.; SEMIKOZOV, G.S.; KALINKIN, I.P.

Photometric determination of microquantities of copper by lead diethyldithiocarbamate. Trudy LTI no.61:144-149 '60. (MIRA 15:5)

(Copper--Analysis) (Electrolytes) (Carbamic acid)

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001547910018-5

25389

S/080/61/034/002/009/025
A057/A129

5.1310 (1208, 1273, 2309)

AUTHORS: Rotinyan, A.L., Parfenova, V.S., Puchkova, R.A., Semikozov, G.S.

TITLE: Electrochemical method of purifying an electrolyte from impurities under conditions affected by ultrasonic vibrations

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 339-344

TEXT: The effect of ultrasonic waves on the electrochemical purification of electrolytes was investigated and a scheme for the removal of iron, copper and cobalt impurities in a nickel electrolyte was presented. It is known that ultrasonic fields decrease the concentration polarization. The present authors demonstrated in previous papers that the intensity of an electrochemical purification is controlled by the diffusion current of the impurity. Thus a favorable effect of ultrasonic waves on electrochemical purification was to be expected. Informational experiments

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carried out with nickel chloride and sulfate solutions containing copper impurities approved this assumption, demonstrating that current density of copper deposition increases 10 times if an ultrasonic field is applied in electrolysis. Electrochemical experiments were carried out to purify nickel chloride electrolytes from copper impurities. The multiplicity factor of purification was expressed by $c_{i_{in.}} / c_{i_t} = 1 + K_{gi}S/Q$ (1), ($c_{i_{in.}}$ = concentration of the impurity in the initial electrolyte, c_{i_t} = concentration of the impurity in the electrolyte in the tank and the outflowing electrolyte, K_{gi} = constant of the convective diffusion rate of the impurity, S = size of the cathode surface in the purification tank, Q = flowing rate of the electrolyte). Plexiglass tanks (313 x 79 x 76 mm), magnetostriction transformers of the type ПМ-1.5 (PM-1.5) with 4.5 kw capacity and 23.7 ke/s frequency were used in the experiments, as well as pure nickel anodes of the Н -1 (N-1) type under following conditions: initial concentration of nickel chloride 122±2 g/l, 1,000±70 mg Cu per liter, temperature 40°C and pH 1-2. In the first series of experiments the effect of the flow rate on the purification multiplicity factor was

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studied and it was observed (Fig 3) that the latter decreases with increasing flow rate. Further experiments showed that the purification multiplicity factor is neither affected by the cathodic current density nor by the initial copper concentration. Constants of convective diffusion rate were calculated (Tab.) and an almost constant K_{gi} value of about $0.26 \cdot 10^{-2}$ cm/sec was observed, i.e., 24 times greater than the value for corresponding experiments without ultrasonic vibrations. The present authors remark that the degree of intensification obtained is not the maximum, thus further improvements could be realized with optimum conditions. The following scheme suitable for sulfate-chloride as well as pure chloride electrolytes with medium or high nickel content is suggested: The analyte containing Fe, Cu, and Co impurities is purified from Fe in the usual manner (oxidation by air and precipitation of Fe with nickel carbonate and further repulpation of the iron). After filtration the solution is transferred into the tank for the first electrochemical purification with ultrasonic vibration. Anodes are soluble and can be manufactured from cuts or defective cathode nickel. Electrolysis is carried

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